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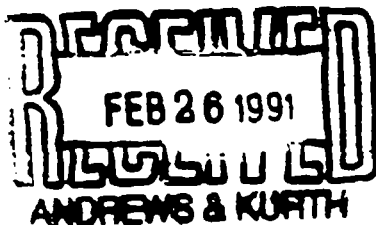
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

105 South Meridian Street
PO Box 6015
Indianapolis 46206-6015
Telephone 317 232-6003

February 21, 1991

VIA CERTIFIED MAIL - P404-637-597

Mr. Robert N. Steinwurtzel
Andrews and Kurth, Attorneys
1701 Pennsylvania Avenue
Suite 200
Washington, DC 20006



Re: Closure Plan
Notice of Deficiency
Technical Review
U.S.S. Lead Refinery, Inc.
East Chicago, IN
EPA ID No. IND047030226

Dear Mr. Steinwurtzel:

The Indiana Department of Environmental Management (IDEM) has reviewed the Closure Plan for U.S.S. Lead Refinery, Inc., dated January 17, 1991. The Closure Plan has been reviewed for technical adequacy and determined to be inadequate pursuant to 329 IAC 3.

The enclosed Notice of Deficiency (NOD) outlines the specific deficiencies and provides discussions relevant to the revision. The information requested by the NOD must be submitted, in full, as an amended Closure Plan. This is required before the Closure Plan may be considered technically adequate.

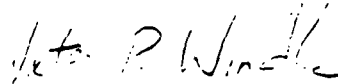
The completed Closure Plan must be received by this office within thirty (30) days of the date of this notice. Each page of your submission must be uniquely numbered and must have the date of the submission. In addition to this requirement, please combine the closure plan and the site assessment into one document which will become the closure plan for U.S.S. Lead.

Please submit six (6) copies of the amended Closure Plan to the IDEM to the address above.

Mr. Robert N. Steinwurtzel
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If you have any questions regarding this matter, please contact Mr. Stephen West, at (317)232-3264.

Sincerely,



Victor P. Windle, Chief
Plan Review and Permit Section
Hazardous Waste Management Branch
Solid and Hazardous Waste Management

SDW

Enclosures

cc: Mr. Hak Cho, U.S. EPA, Region V (With Enclosure)
Ms. Fayola Wright, U.S. EPA, Region V
Mr. Michael Sickels (With Enclosure)
Mr. Stephen Pekera (With Enclosure)
Mr. Steve Buckel (With Enclosure)

Closure Plan
Notice of Deficiency
Technical Review
U.S.S. Lead Refinery, Inc.
East Chicago, Indiana
IND047030224

Included are the deficiencies noted for the closure plan, site assessment, and site safety and health plan. For convenience, these sections have been separated. In the next submittal, these documents should be merged into one complete closure plan. The issues addressed in the site assessment plan are issues which should have been addressed in the closure plan. The site safety and health plan should be included as an addendum to the closure plan along with the laboratory Quality Assurance Project Plan (QAPP) which was submitted earlier.

Closure Plan

1. Closure performance standard (329 IAC 3-21-2)
Describe how closure minimizes the need for post-closure maintenance and controls, minimizes, and eliminates releases of wastes.
2. Removal/decontamination procedures (329 IAC 3-21-3(a)(4))
Provide a more thorough description of the decontamination procedures, and a specific description of the methods of disposal of the waste piles.
3. Other Closure activities during closure period
(329 IAC 3-21-3(b)(5))
Provide a clear program of sampling procedures and intervals.
4. Disposal or decontamination of equipment, structures, and soils (329 IAC 3-21-5)
This section is not only inadequate, but also untrue. Page 12 states that there is no criteria for judging whether a surface is clean. This area should be steam cleaned, triple rinsed, and the rinsate tested for hazardous constituents.
5. Survey Plat and Certification by Professional Land Surveyor
(329 IAC 3-21-7)
This section must be included if post-closure activities are necessary. Please make a provision for this outcome.
6. Notice in deed (329 IAC 3-11-10(b))
This section must be included if post-closure activities are necessary. Please make a provision for this outcome.
7. Certification of Notice (329 IAC 3-21-10(c))

This section must be included if post-closure activities are necessary. Please make a provision for this outcome.

- 8. Closure Cost Estimate (329 IAC 3-22-3)**
 - a. Decontamination and/or removal of equipment
Rinsing/Wipe test not specified.**
 - b. Disposal of waste water or cleaning waste
Not specified.**
 - c. Sampling and analysis
Not adequate for rinsate analysis**
 - d. Certification of closure
No provision for Registered Professional Engineer's fees.**
- 9. Financial Assurance for Closure (329 IAC 3-22-4)**

After further review, it has been determined that financial assurance is necessary in this situation. Please provide the necessary information.
- 10. Liability Coverage (329 IAC 3-22-24)**

If a demonstration is made showing that liability insurance is impossible to obtain, the facility will be allowed to close without it, however, a fine will be imposed for failing to provide complete liability coverage.
- 11. Post-closure Care and Use of Property (329 IAC 3-21-8)**

This section must be included if post-closure activities are necessary. Please make a provision for this outcome.
- 12. Submittal of Post-closure Plan (329 IAC 3-21-9)**

This section must be included if post-closure activities are necessary. Please make a provision for this outcome.
- 13. Post-closure Notices (329 IAC 3-21-10)**

This section must be included if post-closure activities are necessary. Please make a provision for this outcome.
- 14. Post-closure Care Cost Estimate (329 IAC 3-22-13)**

This section must be included if post-closure activities are necessary. Please make a provision for this outcome.
- 15. Waste Piles -- Facility Description (329 IAC 3-21)**
 - a. Hydrogeologic Information**
 - (1) Ground-water and soil conditions
Please specify.**
 - (2) Ground-water and monitoring systems**

Please specify.

- (3) Corrective actions
Please specify.

b. Waste piles description

- (1) Roof area and containment system design, drawings
No drawings submitted.
- (2) Liner system and leachate collection system design
Please specify.

16. Waste Piles -- Closure procedures

- a. Estimates of maximum quantity of inventory to be removed (329 IAC 3-21-3(b)(3))
Provide provision for leachate collection.
- b. Procedures for handling removed inventory
(329 IAC 3-21-3(b)(3))
Off-site disposal of calcium sulfate must be specified under the agreed order. A recycling facility for the baghouse dust must be located and contracted with.
- c. Procedures for decontamination and/or disposal
(329 IAC 3-21-3(b)(4))
 - (1) Pile base and other equipment/structures decontamination
No sampling or decontamination specified for any waste pile. Please specify.
 - (2) Cleaning agent/rinsewater treatment or disposal
 - (a) On-site treatment/disposal
Please specify.
 - (b) Off-site treatment/disposal
Please specify.
 - (3) Pile base and other equipment/structures demolition and removal
 - (a) On-site treatment/disposal
Please specify.
 - (b) Off-site treatment/disposal
Please specify.
 - (4) Contaminated soil removal
No soil removal specified.

- (a) Estimated amount of contaminated soil to be removed
No soil removal specified.
 - (b) Soil removal methods
No soil removal specified.
 - (c) On-site disposal
No soil removal specified.
 - (d) Off-site disposal
No soil removal specified.
- d. Leachate management (329 IAC 3-21-3(b)(5))
 - (1) Estimates of volumes collected
No leachate removal specified.
 - (2) Treatment and disposal methods
No leachate removal specified.
 - (a) On-site disposal
No leachate removal specified.
 - (b) Off-site disposal
No leachate removal specified.
- e. Ground-water monitoring (329 IAC 3-12-3(b)(5), 329 IAC 3-20-2)
 - (1) Number, location, and frequency of samples
No ground-water monitoring specified.
 - (2) Procedures for analysis
No ground-water monitoring specified.
- f. Closure certification (329 IAC 3-21-6)
 - (1) Activities to be conducted
Verification of clean closure not specified.
 - (2) Testing and analyses to be performed
See comment #4.
 - (3) Criteria for evaluating adequacy
Please specify.
 - (4) Schedule of inspections
Please specify.
 - (5) Types of documentation

No documentation included in closure plan.

Site Assessment Plan

1. Page 18, Table 2 indicates that the calcium sulfate sludge is E.P. Toxic for cadmium and lead. It appears that this answers the question of whether the calcium sulfate is hazardous or not.
2. Page 25 describes a report for the IDEM due in July, 1990. Please provide a copy of this report.
3. Page 26 illustrates that besides lead, cadmium is also an area of concern.
4. Page 30 states that a procedure called Synthetic Precipitation Leach (SPL) will be used to determine the extent of contamination. Indiana does not recognize SPL as a criteria for judging the extent of any contamination. Indiana does, however, require E.P. Toxicity be run to show contamination. It is up to U.S.S. Lead to do SPL on their own.
5. No further testing of the calcium sulfate sludge is required in order to determine whether to remove it or not (page 31). In the Agreed Order, U.S.S. Lead agreed to develop a closure plan to remove the calcium sulfate sludge.
6. On page 35, sampling of the foundation under the floor is required in any area where hazardous wastes have been stored and the floor is not sealed, or shows signs of cracks, gaps, spalling, etc.
7. Page 36 paragraph 2 does not indicate total number of sampling sites, nor locations.
8. Sampling will continue to a depth where two (2) clean intervals have been reached (page 37).
9. Page 37 paragraph 4 -- Inadequate sample locations and intervals for the first round. Provisions need to be added for change of color, texture, etc. of the waste.
10. Page 39 states that the air in the trench will be analyzed for organic vapors and explosive gasses. Please explain this entry.
11. Page 42 paragraph 3 states that the Toxicity Characteristic Leaching Procedure (TCLP) has replaced the Extraction Procedure (E.P.) Toxicity. This is not true in Indiana. E.P.

Toxicity must be used to determine the extent of contamination.

12. Page 49 paragraph 3 implies that not all data collected will be reported. All values must be reported, whether or not they are used in the statistics.
13. The schedule on page 51 states that all activities in the site assessment plan will be completed within 365 days. The closure plan allows for all activities to be completed within 180 days. Explain this discrepancy.
14. In general, ground-water and surface water are not addressed. These are unlined and uncontained waste piles in a sandy area.

Site Safety and Health Plan

1. Page 3 states that level "D" personal protective gear will be worn. In the presence of lead dust, level "C" gear should be worn at all times.